

Appl. No. 10/789,321
Reply to Office Action of June 25, 2007

REMARKS/ARGUMENTS

1. Support for claim amendments

(i) made of resin: This is supported by the descriptions in the present specification, such as in page 7, lines 17-22. The amendment is done to make clear that both the core and the shell are made of resin.

(ii) and the core part comprises the colorant: This is supported by the description in the specification from page 10, line 20 to page 11, line 2.

2. Rejections of claims

The Examiner rejected the present claims based on the following References.

- (1) Claims 1 & 3-8: anticipated over Winnik
- (2) Claims 1 & 3-8: anticipated over Ganapathiappan
- (3) Claim 2: obvious over Winnik in view of Smith
- (4) Claim 2: obvious over Ganapathiappan in view of Smith

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3. Arguments

Requirements of a colored microparticle in the ink of the present claim 1 are:

- (i) the colored microparticle has a core/shell structure made of resin;
- (ii) both the core part and shell part are cross-linked with a cross-linking agent; and
- (iii) the core part comprises a colorant.

The ink containing a colored microparticle having all of the above-described features (i)-(iii) makes it possible to achieve excellent solvent resistance and improved dispersion stability.

<About Winnik>

The Examiner considers that Winnik anticipates the present claims. To anticipate the claims, Winnik must teach (or inherently teach) all of the elements required by the claims. However, Winnik discloses an ink-jet ink having a pigment comprised of a polymer core with a coating thereover a silica shell, and wherein the

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shell has grafted thereon reactive dyes (see col. 1 lines 11-13 of Winnik.) This is not the present invention as claimed.

As is noted above, the pigment of Winnik is attached with a silica shell which encapsulates a polymer shell. This structure excludes the requirements of Claim 1 as outlined above and is a completely different structure. Therefore, Winnik cannot anticipate the present claims.

Furthermore, the present claims provide unexpected results compared to Winnik. It is submitted that a colored microparticle having a core/shell structure both made of resin improves adhesiveness to the printed material by forming a film on the surface of the printed material. This cannot be expected from a pigment bonded on a silica shell/ polymer core element of Winnik.

<About Ganapathiappan>

The Examiner states that the polymer particle of Ganapathiappan anticipates the core/shell particle of the present claims.

However, although the polymer particle of Ganapathiappan requires a cross-linking both in the core and the shell, the

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polymer particle of Ganapathiappan does not contain a colorant in the core. Therefore, the claims cannot be anticipated.

Furthermore, because of the different purposes, the claims are not an obvious modification. The polymer particle of Ganapathiappan is used as an additive of the ink and traps the colorants or other particles present in the ink after landing on the print media (see [0007] of Ganapathiappan.)

The structure of the polymer particle of Ganapathiappan is again completely different and the effects produced thereby are not the same as those of the present claims.

<About Smith>

Smith is cited as a secondary reference for the obviousness rejections. Disclosed is a fixing fluid which is applied to the print substrate either prior to or subsequent to application of the ink image with the printer (see col. 1, lines 9-11.)

The fixing fluid of Smith is not incorporated in an ink-jet ink. There is not teaching or suggestion to combine the fixing fluid of Smith with the technologies of Winnik or Ganapathiappan to achieve an ink-jet ink comprising the colored microparticle of

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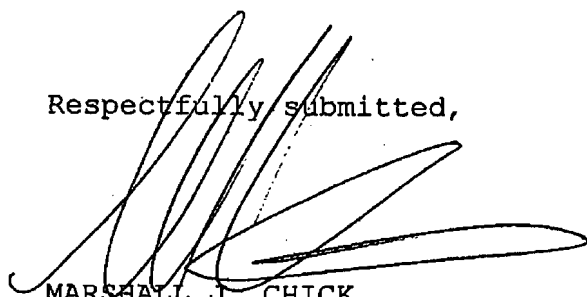
the present claims. Furthermore, even if combined, the invention as now claimed is not obvious.

In view of the above, it is submitted that no combination of art, even if proper, renders the claims obvious. Furthermore, the combination seems non-obvious.

Allowance of the application is therefore respectfully requested.

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Respectfully submitted,



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